JOINT CLAIM CONSTRUCTION CHART

EXHIBIT B

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

DISPUTED TERMS

U.S. Patent No. 9,363,012

Claim No.	U.S. Patent No. 9,363,012	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
1.	1. A telecommunications monitoring method, comprising: receiving an incoming optical signal at a downstream termination point, located within an optical multiplexor box, of an optical fiber; splitting, within the optical multiplexor box, the incoming optical signal into a data optical signal and a test optical signal; **tapping** the data optical signal to produce a **tapped** optical signal; processing, within the optical multiplexor box, the data optical signal to produce a data electrical signal indicative of data encoded in the incoming optical signal; processing the **tapped** optical signal to produce an electrical signal indicative of a power of the data optical signal; and performing, by an optical time-domain reflectometer (**OTDR**) module within the optical multiplexor box, **OTDR** monitoring of an optical fiber selected from: an incoming	"**tap**" / "**tapping**" / "**tapped**" No construction necessary. If construed, "removing or extracting a portion of an optical signal from an optical fiber or other communications route."	**"tap" / "tapping" / "tapped"** "surreptitious breach of an optical signal"	**"tap" / "tapping" / "tapped"**
		"OTDR" "Optical Time-Domain Reflectometer, a device that can monitor an optical fiber by measuring the time for a light wave to reflect back from a potential fault in the optical fiber	**"OTDR"** "fault detection device that uses non-data bearing, discrete high power pulses via a dedicated transmitter and receiver separate from the data transmitter and receiver"	**"OTDR"**
		"phase modulate" and grammatical variations "alter the phase of light to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations** "alter the phase of light while keeping the amplitude of the light constant to create an optical signal having a	**"phase modulate" and grammatical variations**

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 9,363,012	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	optical fiber associated with the incoming optical signal and an outgoing optical fiber associated with an outgoing optical signal.		phase that is representative of data"	
3	The method as recited in claim 2, wherein processing the **tapped** optical signal includes providing the **tapped** optical signal to a photodetector and amplifying an output of the photodetector.	See "tap" / "tapping" / "tapped" above.	See "tap" / "tapping" / "tapped" above.	See "tap" / "tapping" / "tapped" above.
5	telecommunications monitoring method, comprising: receiving, by an optical multiplexor box, an incoming optical signal at a downstream termination of a downstream optical fiber; splitting the incoming optical signal into a data optical signal and a test optical signal; **tapping** the data optical signal to produce a **tapped** optical signal; processing the data optical signal to produce a data electrical signal indicative of data encoded in the incoming optical signal; processing the **tapped** optical signal to produce an electrical signal indicative of a	See "tap" / "tapping" / "tapped" above.	See "tap" / "tapping" / "tapped" above.	See "tap" / "tapping" / "tapped" above.
		See "OTDR" above.	See "OTDR" above.	See "OTDR" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 9,363,012	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	power of the data optical signal; performing optical time-domain reflectometer (**OTDR**) monitoring of the test optical signal; filtering the electrical signal indicative of the power with a low pass filter to produce an average power signal; amplifying the average power signal to produce an amplified power signal; comparing the amplified power signal to a threshold; and generating an alarm in accordance with a result of said comparing.			
9	A telecommunications signal processing method, comprising: receiving, by an optical **line card**, a **phase modulated** optical signal at a downstream termination point of an optical fiber, wherein the optical signal includes a data optical signal of a first wavelength multiplexed with a test optical signal of a second wavelength; de-multiplexing the data optical signal and the test optical signal; detecting data encoded in the data optical	**"line card"** No construction necessary.	**"line card"** "card having a transceiver"	**"line card"**
		See "OTDR" above.	See "OTDR" above.	See "OTDR" above.
		See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 9,363,012	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	signal; performing, by the optical **line card**, optical time-domain reflectometer (**OTDR**) monitoring of the test optical signal.			
11	An optical transceiver **line card** for terminating an optical fiber, the optical transceiver line card comprising:	See "line card" above.	See "line card" above.	See "line card" above.
	a printed circuit board to which a plurality of components are affixed, the plurality of components comprising: a fiber connector configured to receive a downstream termination point of the optical fiber; a wavelength-multiplexed splitter configured to: receive a **phase-modulated** incoming optical signal via the optical fiber; and split the incoming optical signal into a data optical signal and a test optical signal, wherein a wavelength of the data optical signal and a wavelength of the test optical signal differ; an optical receiver configured to receive the	See "phase modulate" above. See "OTDR" above.	See "phase modulate" above. See "OTDR" above.	See "phase modulate" above. See "OTDR" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 9,363,012	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	data optical signal and produce an electrical signal indicative of data encoded in the incoming optical signal; and an optical time-domain reflectometer (**OTDR**) module configured to: receive the test optical signal; and perform **OTDR** monitoring of the test optical signal.			
12	The optical transceiver **line card** of claim 11, wherein the plurality of components includes: a second splitter configured to: receive the data optical signal; **tap** a signal off of the data optical signal to produce a **tapped** optical signal; and pass through a residual of the data optical signal.	See "line card" above. See "tap" / "tapping" / "tapped" above.	See "line card" above. See "tap" / "tapping" / "tapped" above.	See "line card" above. See "tap" / "tapping" / "tapped" above.
13	The optical transceiver **line card** of claim 12, wherein the plurality of components includes:	See "line card" above. **"energy level detector"**	See "line card" above. **"energy level detector"**	See "line card" above. **"energy level detector"**

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 9,363,012	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	an **energy level detector** configured to: receive the **tapped** optical signal; and produce an electrical signal indicative of an energy of the **tapped** optical signal.	"device to measure optical power"	"device for optical tap detection"	
		See "tap" / "tapping" / "tapped" above.	See "tap" / "tapping" / "tapped" above.	See "tap" / "tapping" / "tapped" above.
14	The optical transceiver **line card** of claim 11, wherein the plurality of components includes: an **OTDR** controller configured for providing monitoring information indicative of the **OTDR** monitoring to a processor bus accessible to an external processor.	See "line card" above.	See "line card" above.	See "line card" above.
		See "OTDR" above.	See "OTDR" above.	See "OTDR" above.
15	The optical transceiver **line card** of claim 14, wherein the plurality of components includes: an energy level controller configured for providing energy level threshold information to the processor via the processor bus.	See "line card" above.	See "line card" above.	See "line card" above.
16	A method for monitoring optical fibers with an optical time domain reflectometer (**OTDR**) module integrated on a transceiver **line card**,	See "OTDR" above.	See "OTDR" above.	See "OTDR" above.
		See "line card" above.	See "line card" above.	See "line card" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 9,363,012	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	the method comprising: receiving, by the transceiver card located in an optical multiplexor box, an incoming optical signal at a downstream termination of an optical fiber; splitting, within the optical multiplexor box, the incoming optical signal into a data optical signal and a test optical signal; **tapping** the data optical signal to produce a **tapped** optical signal; processing, within the optical multiplexor box, the data optical signal to produce a data electrical signal indicative of data encoded in the incoming optical signal; processing the **tapped** optical signal to produce an electrical signal indicative of a power of the data optical signal; receiving the test optical signal by the optical time-domain reflectometer (**OTDR**) module; and monitoring, by the **OTDR** module, the optical fiber by performing **OTDR** monitoring of test optical signal.	See "tap" / "tapping" / "tapped" above.	See "tap" / "tapping" / "tapped" above.	See "tap" / "tapping" / "tapped" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 9,363,012	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
17	An optical fiber monitoring method, comprising: receiving, by a transceiver **line card**, located in an optical multiplexor box and including an integrated optical time-domain reflectometer (**OTDR**), an incoming optical signal via a first optical fiber;	See "line card" above.	See "line card" above.	See "line card" above.
		See "line card" above.	See "line card" above.	See "line card" above.
		See "tap" / "tapping" / "tapped" above.	See "tap" / "tapping" / "tapped" above.	See "tap" / "tapping" / "tapped" above.
	sending, by the transceiver card, an outgoing optical signal via a second optical fiber; **tapping** a **tapped** optical signal off of the incoming optical signal; processing, within the optical multiplexor box, a data optical signal split off of the incoming optical signal to produce a data electrical signal indicative of data encoded in the incoming optical signal; processing the **tapped** optical signal to produce an electrical signal indicative of a power of the data optical signal; and performing, by the integrated **OTDR** module, **OTDR** monitoring of a particular optical fiber selected from the group consisting of: the first optical fiber and the second optical fiber.	See "OTDR" above.	See "OTDR" above.	See "OTDR" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

U.S. Patent No. 6,594,055

Claim No.	U.S. Patent No. 6,594,055	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
1	A fiber optic data transmission system comprising: a transmitter having a light source producing light, a **phase modulator** for **phase modulating** the light source, and a controller for controlling the **phase modulator** as a function of an input electronic data stream and a second electronic data stream having a delay, the controller having a controller output electronic data stream of a plurality of bits, each bit being either a binary zero or a binary one, the **phase modulator** creating a **phase-modulated** optical signal, for each bit the **phase modulator** imparting on the light for each binary zero of the controller output electronic data stream either a first phase corresponding to the binary zero or a second phase offset 180 degrees from the first phase corresponding to the binary one so as to create the **phase-modulated** optical signal, the transmitter having an optical output for the **phase-modulated** optical signal, the **phase-modulated** optical signal at the optical output being free of amplitude modulation as a function of the input electronic data stream; an optical fiber receiving the optical signal;	"**path length difference"** "difference in the length of the path"	"**path length difference"** "difference in the physical length of the path"	"**path length difference"**
		"phase modulate" and grammatical variations "alter the phase of light to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations** "alter the phase of light while keeping the amplitude of the light constant to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations**

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 6,594,055	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	and a receiver receiving the optical signal from the optical fiber, the receiver having a splitter for splitting the optical signal into a first path and a second path, with a **path length difference** between the first path and second path being a function of the delay in the second electronic data stream.			
27	A fiber optic data transmission system comprising: **means for phase modulating light as a function of an input electronic data stream and a second electronic data stream having a delay, thus creating a phase-modulated optical signal with encoded information for recovery**, the means for **phase modulating** the light including an output for the **phase-modulated** optical signal, the **phase-modulated** optical signal at the optical output being free of amplitude modulation as a function of the input electronic data stream; means for transporting the optical signal, the transporting means being operably connected to the **phase modulating** light means; and **means for receiving the optical signal from the transporting means**, the receiving means	See "phase modulate" above. **"means for phase modulating as a function of an input electronic data stream and a second electronic data stream having a delay, thus creating a phase modulated optical signal with encoded information for recovery"** This is a means-plus-function term. Function: "phase modulating light as a function of an input electronic data stream and a second electronic data stream having a delay, thus creating a	See "phase modulate" above. **"means for phase modulating as a function of an input electronic data stream and a second electronic data stream having a delay, thus creating a phase modulated optical signal with encoded information for recovery"** This claim term is governed by 35 U.S.C. § 112(6). Function: "phase modulating light as a function of an input	See "phase modulate" above. **"means for phase modulating as a function of an input electronic data stream and a second electronic data stream having a delay, thus creating a phase modulated optical signal with encoded information for recovery"**

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 6,594,055	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	including an interferometer having a **path length difference** which is a function of the delay in the second electronic data stream.	phase-modulated optical signal with encoded information for recovery." The corresponding disclosed structures are: an exclusive-OR gate (Fig. 2 element 118; 3:1-9; 4:62-65; 5:1-3) and a phase modulator (Fig. 1 element 16; 2:33- 34; 3:50-51; 4:42- 43).	electronic data stream and a second electronic data stream having a delay, thus creating a phase modulated optical signal with encoded information for recovery" Corresponding Structure: controller 18 including a delayed feedback exclusive-OR gate 118 and a phase modulator 16 receiving the output of the controller 18. '055 pat. 4:41-5:7 (describing that phase modulator 16 shifts the phase of the light in response to controller 18, and that controller 18 implements "a delayed-feedback exclusive-OR gate"), Fig. 1 (illustrating phase modulator 16 coupled to controller 18), Fig. 2 (illustrating controller 18 with the delayed feedback exclusive-OR gate 118).	
		"means for receiving the optical signal from the	**"means for receiving the optical signal from the**	**"means for receiving the optical signal from**

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 6,594,055	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
		transporting means" This claim term is governed by 35 U.S.C. § 112(6). Function: "receiving the optical signal from the transporting means" The corresponding disclosed structures are: the receivers described in columns 2 and 3 (2:34-64; 3:25-36; 3:55-60); and/or receiver 30 (4:54-60; 5:26-6:7; Figs. 1, 3).	**transporting means"** This claim term is governed by 35 U.S.C. § 112(6). Function: "receiving the optical signal from the transporting means" Corresponding Structure: a receiver including an interferometer having a delay fiber, and an output detector. *See* '055 pat. 4:54-55 ("Optical signal 22 is transmitted over fiber 20 to receiver 30."), id. at 4:37-38 ("The system 1 includes a transmitter 10, an optical fiber 20, and a receiver 30."), 4:58-60, Abstract ("The receiver has a splitter for splitting the optical signal into a first path and a second path. The second path has a second path length longer than the first path length."), 5:61-66 (describing output detector 38), 6:1-7 ("The	**the transporting means"**

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 6,594,055	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
			interferometer 40 comprising coupler/splitter 34 and 36, fibers 43 and 45, delay fiber 46, and depolarizer 48 thus functions as an optical exclusive-or gate with one input leg delayed for signals arriving at input 41 of coupler 34. Interferometer 40 as a whole thus optically and physically "decodes" the signal OP produced by the delayed feedback exclusive-or gate 118 of FIG. 2.")	
		See "path length difference" above.	See "path length difference" above.	See "path length difference" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

U.S. Patent No. 7,620,327

Claim No.	U.S. Patent No. 7,620,327	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
1	A transceiver card for a telecommunications box for transmitting data over a first optical fiber and receiving data over a second optical fiber, the card comprising: a transmitter for transmitting data over the first optical fiber, the transmitter having a laser, a modulator, and a controller receiving input data and controlling the modulator as a function of the input data, the transmitter transmitting optical signals for telecommunication as a function of the input data; a fiber output optically connected to the laser for connecting the first optical fiber to the card; a fiber input for connecting the second optical fiber to the card; a **receiver** optically connected to the fiber input for receiving data from the second optical fiber; and an **energy level detector** optically connected between the **receiver** and the fiber input to measure an energy level of **the optical signals**, wherein the **energy level detector** includes a	**"the optical signals"** No construction necessary. *Alternatively*: "the optical data signals received on the fiber input from the second optical fiber"	**"the optical signals"** "transmitting optical signals" is antecedent for "the optical signals," *otherwise* Indefinite	**"the optical signals"**
		"receiver" No construction necessary.	**"receiver"** "receiver without a demodulator"	**"receiver"**
		"energy level detector" device to measure optical power.	**"energy level detector"** device for optical tap detection.	**"energy level detector"**

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 7,620,327	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	plurality of thresholds.			
3	The card as recited in claim 1 wherein the modulator is a **phase modulator.**	**"phase modulate" and grammatical variations** "alter the phase of light to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations** "alter the phase of light while keeping the amplitude of the light constant to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations**
13	The card as recited in claim 1 further comprising a first splitter splitting the optical signal to the **energy level detector**, and a second splitter for an **OTDR**.	**"OTDR"** "Optical Time-Domain Reflectometer, a device that can monitor an optical fiber by measuring the time for a light wave to reflect back from a potential fault in the optical fiber	**"OTDR"** "fault detection device that uses non-data bearing, discrete high power pulses via a dedicated transmitter and receiver separate from the data transmitter and receiver"	**"OTDR"**
		See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 7,620,327	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
14	A transceiver card for a telecommunications box for transmitting data over a first optical fiber and receiving data over a second optical fiber, the card comprising: a transmitter for transmitting data over the first optical fiber, the transmitter having a laser, a modulator and a controller receiving input data and controlling the modulator as a function of the input data, the transmitter transmitting optical signals for telecommunication as a function of the input data; a fiber output optically connected to the laser for connecting the first optical fiber to the card; a fiber input for connecting the second optical fiber to the card; a **receiver** optically connected to the fiber input for receiving data from the second optical fiber; and an **energy level detector** optically connected between the **receiver** and the fiber input input to measure an energy level of **the optical signals**, the **energy level detector** including a threshold indicating a drop in amplitude of a **phase-modulated** signal.	See "receiver" above.	See "receiver" above.	See "receiver" above.
		See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.
		See "the optical signals" above.	See "the optical signals" above.	See "the optical signals" above.
		See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 7,620,327	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
16	The card as recited in claim 14 wherein the modulator is a **phase modulator**.	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.
24	The card as recited in claim 14 further comprising a first splitter splitting the optical signal to the **energy level detector**, and a second splitter for an **OTDR**.	See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.
		See "OTDR" above.	See "OTDR" above.	See "OTDR" above.
25	A transceiver card for a telecommunications box for transmitting data over a first optical fiber and receiving data over a second optical fiber, the card comprising: a transmitter for transmitting data over the first optical fiber, the transmitter having a laser, a modulator and a controller receiving input data and controlling the modulator as a function of the input data, the transmitter transmitting optical signals for telecommunication as a function of the input data; a fiber output optically connected to the laser for connecting the first optical fiber to the card; a fiber input for connecting the second optical fiber to the card; a **receiver** optically connected to the fiber input for receiving data from the second optical fiber; and	See "receiver" above.	See "receiver" above.	See "receiver" above.
		See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.
		See "the optical signals" above.	See "the optical signals" above.	See "the optical signals" above.
		See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 7,620,327	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	an **energy level detector** to measure an energy level of **the optical signals**, the **energy level detector** including a threshold indicating a drop in amplitude of a **phase-modulated** signal.			
35	The card as recited in claim 25 further comprising a first splitter splitting the optical signal to the **energy level detector**, and a second splitter for an **OTDR**.	See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.
		See "OTDR" above.	See "OTDR" above.	See "OTDR" above.
36	A transceiver card for a telecommunications box for transmitting data over a first optical fiber and receiving data over a second optical fiber, the card comprising: a transmitter for transmitting data over the first optical fiber, the transmitter having a laser, a modulator and a controller receiving input data and controlling the modulator as a function of the input data, the transmitter transmitting optical signals for telecommunication as a function of the input data; a fiber output optically connected to the laser for connecting the first optical fiber to the	See "receiver" above.	See "receiver" above.	See "receiver" above.
		See "the optical signals" above.	See "the optical signals" above.	See "the optical signals" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 7,620,327	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	card; a fiber input for connecting the second optical fiber to the card; a **receiver** optically connected to the fiber input for receiving data from the second optical fiber; a splitter to split at least a portion of **the optical signals** to form a split optical signal, a photodetector to measure the split optical signal, the photodetector outputting an electric voltage to correlating to an optical power of the split optical signal, and a detector controller connected electrically to the photodetector.			
39	The card as recited in claim 36 further comprising a second splitter for an **OTDR**.	See "OTDR" above.	See "OTDR" above.	See "OTDR" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

U.S. Patent No. 8,374,511

Claim No.	U.S. Patent No. 8,374,511	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
1	A method for operating an optical fiber multiplexor comprising: feeding input data to a controller of a transmitter of a telecommunications box, the telecommunications box having an electronic data input for the input data and an electronic data output; using the controller, controlling a modulator to modulate light from a laser as a function of the input data; sending the modulated light as an optical signal from the transmitter over an optical fiber; receiving the optical signals from the optical fiber at a **receiver** of a further telecommunications box and converting the optical signals to electronic output data; passing the optical signals to a photodetector to produce an electric signal; and filtering the electrical signal to produce an average optical power.	**"receiver"** No construction necessary.	**"receiver"** "receiver without a demodulator"	**"receiver"**
8	The method as recited in claim 1 further comprising continuously operating an **OTDR**	**"OTDR"**	**"OTDR"**	**"OTDR"**

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 8,374,511	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	to monitor the optical fiber.	"Optical Time-Domain Reflectometer, a device that can monitor an optical fiber by measuring the time for a light wave to reflect back from a potential fault in the optical fiber"	"fault detection device that uses non-data bearing, discrete high power pulses via a dedicated transmitter and receiver separate from the data transmitter and receiver"	
9	A method for operating an optical fiber multiplexor in a **phase modulation** mode comprising: feeding input data to a controller of a transmitter of a telecommunications box, the telecommunications box having an electronic data input for the input data and an electronic data output; using the controller, controlling a modulator to **phase modulate** light from a laser as a function of the input data; sending the modulated light as an optical signal from the transmitter over an optical fiber; receiving the optical signals from the optical fiber at a **receiver** of a further telecommunications box and converting the optical signals to electronic output data; passing the **phase-modulated** optical signals	**"phase modulate" and grammatical variations** "alter the phase of light to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations** "alter the phase of light while keeping the amplitude of the light constant to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations**
		See "receiver" above.	See "receiver" above.	See "receiver" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 8,374,511	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	to a photodetector to produce an electric signal; and filtering the electrical signal to produce an average optical power.			
16	The method as recited in claim 9 further comprising continuously operating an **OTDR** to monitor the optical fiber.	See "OTDR" above.	See "OTDR" above.	See "OTDR" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

U.S. Patent No. 7,099,592

Claim No.	U.S. Patent No. 7,099,592	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
1	A card for transmitting data over at least one optical fiber, the card comprising: a transmitter having at least one light source and a **phase modulator** for **phase modulating** light from the source so as to create **phase-modulated** optical signals in the light as a function of an input electronic data stream; and a receiver having an interferometer for reading received optical signals, the interferometer having a delay loop fiber; and a fastening device for securing the delay loop fiber.	**"phase modulate" and grammatical variations** "alter the phase of light to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations** "alter the phase of light while keeping the amplitude of the light constant to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations**
3	The card as recited in claim 1 further including an **energy level detector**.	**"energy level detector"** "device to measure optical power"	**"energy level detector"** "device for optical tap detection"	**"energy level detector"**
5	The card as recited in claim 4 further comprising a switch for switching between an amplitude-modulated mode and a **phase-modulated** mode.	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.
10	The card as recited in claim 1 further comprising a switch for switching between an	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 7,099,592	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	amplitude-modulated mode and a **phase-modulated** mode.			
13	A card for transmitting data over at least one optical fiber, the card comprising: a transmitter having at least one light source and a **phase modulator** for **phase modulating** light from the source so as to create **phase-modulated** optical signals in the light as a function of an input electronic data stream; and a receiver having an interferometer for reading received optical signals; and a faceplate having a fiber tap signal device for indicating a fiber tap.	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.
14	A card for transmitting data over at least one optical fiber, the card comprising: a transmitter having at least one laser and a single **phase modulator** for **phase modulating** all of the light from the laser so as to create **phase-modulated** optical signals in the light as a function of an input electronic data stream; a receiver having an interferometer for reading received optical signals; and a switch for switching between an amplitude-modulated mode and a **phase-modulated**	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.

Claim No.	U.S. Patent No. 7,099,592	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	mode.			
17	The card as recited in claim 14 further including an **energy level detector**.	See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.
19	The card as recited in claim 14 wherein the card includes a faceplate having a fiber **tap** signal device.	"**tap**" / "**tapping**" / "**tapped**" No construction necessary. If construed, "removing or extracting a portion of an optical signal from an optical fiber or other communications route."	**"tap" / "tapping" / "tapped"** "surreptitious breach of an optical signal"	**"tap" / "tapping" / "tapped"**

U.S. Patent No. 6,469,816

Claim No.	U.S. Patent No. 6,469,816	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
1	A fiber optic data transmission system comprising: a transmitter having a laser emitting a continuous wave light, a **phase modulator phase modulating** the continuous wave light as a function of an electronic input data stream and of an electronic feedback loop with a feedback time delay, the electronic feedback loop being fed back to the electronic input data stream, so as	**"phase modulate" and grammatical variations** "alter the phase of light to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations** "alter the phase of light while keeping the amplitude of the light constant to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations**

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 6,469,816	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	to create an optical signal bearing information in **phase-modulated** form, and a telecommunications optical fiber connected to at least one receiver, the **phase-modulator** being connected to the telecommunications fiber so that the **phase-modulated** information optical signal is transmitted over the telecommnunications fiber without recombining with the continuous wave light, the receiver including an interferometer having a first fiber arm and a second fiber arm and having an interferometric delay being a function of the feedback time delay.			
4	the system as recited in claim 1 wherein the **phase-modulator phase modulates** all of the continuous wave light.	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.
7	A method for sending data in **phase-modulated** form over a telecommunications optical fiber comprising the steps of: receiving electronic input data; feeding back feedback electronic data with a feedback time delay and combining the feedback electronic data with the electronic input data so as to create an electronic control	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 6,469,816	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	data stream; **phase-modulating** continuous wave light from a laser as a function of the electronic control data stream so as to create a **phase-modulated** optical data stream, sending the **phase-modulated** optical data stream over a telecommunications optical fiber in a **phase-modulated** form without the continuous wave light entering the optical fiber directly from the laser, and receiving the **phase-modulated** optical data and passing the optical data through an interferometer having an interferometric delay being a function of the feedback time delay.			
12	A method for sending data in **phase-modulated** form over a telecommunications optical fiber comprising the steps of: receiving electronic input data; feeding back feedback electronic data with a feedback time delay and combining the feedback electronic data with the electronic input data so as to create an electronic control data stream; **phase-modulating** continuous wave light from a laser as a function of the electronic control	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 6,469,816	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	data stream so as to create a **phase-modulated** optical data stream; sending the **phase-modulated** optical data stream over a telecommunications optical fiber in a **phase-modulated form**, all of the continuous wave light entering the optical fiber being **phase modulated**; monitoring an energy level of the **phase-modulated** optical data stream; and receiving the **phase-modulated** optical data and passing the optical data through an interferometer having an interferometric delay being a function of the feedback time delay.			
19	A fiber optic data transmission system comprising: a transmitter having a laser emitting a continuous wave light, a **phase modulator phase modulating** the continuous wave light so as to create an optical signal bearing information in **phase-modulated** form, and an electronic control circuit for controlling the **phase modulator**, the electronic control circuit including an electronic input data stream, an exclusive-or gate and having a feedback loop with a feedback time delay, the electronic input data stream and the feedback	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.
		"energy level detector" "device to measure optical power"	**"energy level detector"** "device for optical tap detection"	**"energy level detector"**

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 6,469,816	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	loop passing though the exclusive-or gate; a receiver, the receiver including an interferometer having a first fiber arm and a second fiber arm and having an interferometric delay being a function of the feedback time delay; a telecommunications optical fiber connected to the receiver, the **phase-modulator** being connected to the telecommunications fiber so that the **phase-modulated** information optical signal is transmitted over the telecommunications fiber without recombining with the continuous wave light; and an **energy level detector** detecting an energy level of the **phase-modulated** optical signal in the optical fiber.			
20	The system as recited in claim 19 wherein the receiver includes the **energy level detector**.	See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

U.S. Patent No. 8,913,898

Claim No.	U.S. Patent No. 8,913,898	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
1	A transceiver card for a telecommunications box for transmitting data over a first optical fiber and receiving data over a second optical fiber, the transceiver card comprising: a transmitter having a laser, a modulator, and a controller configured to receive input data and control the modulator to generate a first optical signal as a function of the input data; a fiber output optically connected to the transmitter and configured to optically connect the first optical fiber to the transceiver card; a **receiver** configured to receive a second optical signal from the second optical fiber and to convert the second optical signal to output data; fiber input optically connected to the **receiver** and configured to optically connect the second optical fiber to the transceiver card; and an **energy level detector** optically connected between the **receiver** and the fiber input to measure an energy level of the second optical signal, wherein the **energy level detector** includes a plurality of thresholds.	**"receiver"** No construction necessary.	**"receiver"** "receiver without a demodulator"	**"receiver"**
		"energy level detector" "device to measure optical power"	**"energy level detector"** "device for optical tap detection"	**"energy level detector"**

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 8,913,898	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
2	The transceiver card as recited in claim 1 wherein the **energy level detector** includes an OR gate.	See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.
3	The transceiver card as recited in claim 1 wherein the modulator is a **phase modulator**.	**"phase modulate" and grammatical variations** "alter the phase of light to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations** "alter the phase of light while keeping the amplitude of the light constant to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations**
4	The transceiver card as recited in claim 3 wherein the second optical signal comprises a **phase modulated** optical signal.	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.
5	The transceiver card as recited in claim 1 wherein the **energy level detector** includes a photodiode and a linear or logarithmic amplifier scaling an output of the photodiode.	See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.
7	The transceiver card as recited in claim 1 wherein the **energy level detector** includes a detector controller capable of setting values for the thresholds.	See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 8,913,898	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
12	The transceiver card as recited in claim 1 wherein the **energy level detector** measures optical power.	See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.
13	The transceiver card as recited in claim 1 further comprising a first splitter splitting the optical signal to the **energy level detector**, and a second splitter for an **OTDR**.	**"energy level detector"** "device to measure optical power"	**"energy level detector"** "device for optical tap detection"	**"energy level detector"**
		"OTDR" "Optical Time-Domain Reflectometer, a device that can monitor an optical fiber by measuring the time for a light wave to reflect back from a potential fault in the optical fiber	**"OTDR"** "fault detection device that uses non-data bearing, discrete high power pulses via a dedicated transmitter and receiver separate from the data transmitter and receiver"	**"OTDR"**
14	A transceiver card for a telecommunications box for transmitting data over a first optical fiber and receiving data over a second optical fiber, the transceiver card comprising: a transmitter having a laser, a modulator, and a controller configured to receive input data and control the modulator to generate a first optical signal as a function of the input data;	See "receiver" above.	See "receiver" above.	See "receiver" above.
		See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 8,913,898	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
	a fiber output optically connected to the transmitter and configured to optically connect the first optical fiber to the transceiver card; a **receiver** configured to receive a second optical signal from the second optical fiber and to convert the second optical signal to output data; a fiber input optically connected to the **receiver** and configured to optically connect the second optical fiber to the transceiver card; and an **energy level detector** configured to measure an energy level of the second optical signal, the **energy level detector** including a threshold indicating a drop in amplitude of the second optical signal.			
15	The transceiver card of claim 14 wherein the **energy level detector** is optically connected between the receiver and the fiber input.	See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.
16	The transceiver card as recited in claim 14 wherein the **energy level detect**or includes an OR gate.	See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.
17	The transceiver card as recited in claim 14 wherein the modulator is a **phase modulator**.	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

Claim No.	U.S. Patent No. 8,913,898	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
18	The transceiver card as recited in claim 14 wherein the second optical signal comprises a **phase-modulated** optical signal.	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.
19	The transceiver card as recited in claim 14 wherein the **energy level detector** includes a photodiode and a linear or logarithmic amplifier scaling an output of the photodiode.	See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.
21	The transceiver card as recited in claim 14 wherein the **energy level detector** includes a detector controller capable of setting a value for the threshold.	See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.
24	The transceiver card as recited in claim 14 wherein the **energy level detector** measures optical power.	See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.
25	The transceiver card as recited in claim 14 further comprising a first splitter splitting the optical signal to the **energy level detector**, and a second splitter for an **OTDR**.	See "OTDR" above.	See "OTDR" above.	See "OTDR" above.
		See "energy level detector" above.	See "energy level detector" above.	See "energy level detector" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

U.S. Patent No. 6,476,952

Claim No.	U.S. Patent No. 6,476,952	Oyster Optics' Proposed Construction	Defendants' Proposed Construction	Court's Construction
1	A fiber optic data transmission system comprising: a transmitter having a laser emitting a continuous wave light, the transmitter including a **phase modulator phase modulating** the continuous wave light and a control circuit controlling the **phase modulator** as a function of an electronic input data stream having a time delay, so as to create a **phase-modulated** optical signal; an optical fiber transmitting the **phase-modulated** optical signal; and a receiver, the receiver including an interferometer for receiving the **phase-modulated** optical signal, the interferometer having a first arm and a second arm, **the second arm being longer than the first arm**, the interferometer having an interferometric delay corresponding to the time delay and a phase difference imparted by the first and second arms, the control circuit imparting a phase to represent a binary zero or one as a function of the phase difference, the control circuit including a digital-to-analog converter having an **output for altering the phase of**	**"phase modulate" and grammatical variations** "alter the phase of light to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations** "alter the phase of light while keeping the amplitude of the light constant to create an optical signal having a phase that is representative of data"	**"phase modulate" and grammatical variations**
		"the second arm being longer than the first arm" No construction necessary.	**"the second arm being longer than the first arm"** "the second arm being physically longer than the first arm"	**"the second arm being longer than the first arm"**
		"**output for altering the phase of the phase modulator**" "converted signal used to alter the phase of light in the phase modulator"	"**output for altering the phase of the phase modulator**" "converted signal used to modulate the phase of light in the phase modulator"	"**output for altering the phase of the phase modulator**"

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

	the phase modulator.			
4	The system as recited in claim 3 wherein at least one of the first arm and the second arms includes an additional **phase modulator**.	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.
5	The system as recited in claim 1 wherein the control circuit includes a **phase-compensation circuit** for rotating a phase imparted by the **phase modulator** by a predetermined amount.	**"phase compensation circuit"** "circuit that provides phase compensation"	**"phase compensation circuit"** "circuit that enables using an interferometer of any phase-difference"	**"phase compensation circuit"**
		See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.
7	The system as recited in claim 6 wherein **phase compensation circuit** includes an N-bit register storing the predetermined amount.	See "phase compensation circuit" above.	See "phase compensation circuit" above.	See "phase compensation circuit" above.
8	The system as recited in claim 7 wherein the **phase compensation circu**it includes an ALU for summing without carry the predetermined amount.	See "phase compensation circuit" above.	See "phase compensation circuit" above.	See "phase compensation circuit" above.
11	The system as recited in claim 5 wherein the **phase compensation circuit** rotates the phase by an amount equal to [(PD−180)/max(Z,**1**)] mod 360, where PD is the phase difference and Z is the number of bits of delay imposed by the second arm of the interferometer relative to the first arm.	See "phase compensation circuit" above.	See "phase compensation circuit" above.	See "phase compensation circuit" above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

12	An optical data transmitter comprising: a laser for producing light; a **phase modulator phase modulating** the light; and an electronic control circuit for receiving an electronic input data stream and controlling the **phase-modulator**, the electronic control circuit including an input data circuit having an electronic delay and a **phase compensation circuit** for altering an output of the input data circuit, the **phase compensation circuit** including an N-bit register for storing a desired phase compensation amount, an ALU for summing without carry the desired phase compensation amount, and a delayed feedback exclusive-or gate having a gate output and receiving the input data stream as an input, and wherein a most significant bit of an ALU output of the ALU is fed together with the gate output through another exclusive-or gate.	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.
		See "phase compensation circuit" above.	See "phase compensation circuit" above.	See "phase compensation circuit" above.
13	A fiber optic data transmission system comprising: a transmitter having a laser emitting a continuous wave light, the transmitter including a **phase modulator phase modulating** the continuous wave light and a control circuit controlling the **phase modulator** as a function of an electronic input	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.
		See "the second arm being longer than the first arm" above.	See "the second arm being longer than the first arm" above.	See "the second arm being longer than the first arm" above.
		See "phase compensation	See "phase compensation	See "phase compensation circuit"

	data stream having a time delay, so as to create a **phase-modulated** optical signal; an optical fiber transmitting the **phase-modulated** optical signal; and a receiver, the receiver including an interferometer for receiving the **phase-modulated** optical signal, the interferometer having a first arm and a second arm, **the second arm being longer than the first arm**, the interferometer having an interferometric delay corresponding to the time delay and a phase difference imparted by the first and second arms, the control circuit imparting a phase to represent a binary zero or one as a function of the phase difference, the control circuit including a **phase-compensation circuit** for rotating a phase imparted by the **phase modulator** by a predetermined amount wherein the predetermined amount is a function of the phase difference imparted by the interferometer, the **phase compensation circuit** including an N-bit register storing the predetermined amount, an ALU for summing without carry the predetermined amount, and a delayed feedback exclusive or gate having a gate output and receiving the input data steam as an input, and a most significant bit of an ALU output of the ALU being fed together with the gate output through another exclusive-or gate.	circuit" above.	circuit" above.	above.

Joint Claim Construction Chart
Oyster Optics, LLC v. Coriant America, Inc., et al.
Case No. 2:16-cv-01302-JRG

14	The system as recited in claim 13 wherein the control circuit includes a digital-to-analog converter having an output for altering a phase of the **phase modulator**, and the input of the converter is an output of the other exclusive-or gate and least significant bits of the ALU output.	See "phase modulate" above.	See "phase modulate" above.	See "phase modulate" above.